

CLAIMS

1. A method for tracking execution of a VoiceXML document of a VoiceXML application by a VoiceXML execution client comprising:

responsive to receiving a request for tracking execution of a VoiceXML document, monitoring at the VoiceXML execution client a downloading of VoiceXML documents for the requested VoiceXML document;

responsive to downloading the requested VoiceXML document, trapping the requested VoiceXML document; and

responsive to receipt of a tracking command message, executing the trapped VoiceXML document in an execution tracking mode.

2. The method of claim 1, wherein trapping the requested VoiceXML document includes pausing execution of the VoiceXML document and initializing the VoiceXML document for execution tracking.

3. The method of claim 2, wherein initializing the VoiceXML document includes compiling the VoiceXML document into executable code, the executable code including markers for identifying at least one VoiceXML element and a respective location of the at least one VoiceXML element within the VXML document.

4. The method of claim 2, wherein initializing the VoiceXML document for execution tracking includes generating at least one marker, the at least one marker including marker information for identifying at least one VoiceXML element contained within the VoiceXML document and for identifying a respective location of the at least one VoiceXML element within the VoiceXML document.

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5. The method of claim 4, wherein the marker information is configured to enable a highlighting of the corresponding VoiceXML element within a listing of the VoiceXML document on a remote display device.

6. The method of claim 1, further comprising:
responsive to trapping the requested VoiceXML document, generating a notification message for indicating a capture of the requested VoiceXML document for execution tracking.

7. The method of claim 1, further comprising:
responsive to a detection of an occurrence of a VoiceXML element during execution tracking of the trapped VoiceXML document, pausing execution of the trapped VoiceXML document and awaiting receipt of a tracker command message, wherein the tracker command message includes at least one of interrogate a variable of the VoiceXML document, continue execution with tracking, and continue execution without tracking.

8. The method of claim 1 further comprising:
responsive to a detection of an occurrence of a VoiceXML element during execution tracking, generating a marker information message for identifying the VoiceXML element and its respective location within the VXML document.

9. The method of claim 8, further comprising:
sending the marker information message to a visual editor device, wherein responsive to the marker information message, the visual editor device highlights the VoiceXML element within a display listing of the VoiceXML document.

10. The method of claim 1, wherein downloading of VoiceXML documents occurs via a web server.

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11. A VoiceXML execution client comprising:

a VoiceXML executor having at least one input for receiving a tracking message, the tracking message including at least a request for execution tracking of a VoiceXML document; and

a VoiceXML compiler operatively coupled to said VoiceXML executor, the VoiceXML compiler responsive to receipt of the tracking message by said VoiceXML executor for monitoring a downloading of the VoiceXML document and in response to downloading of the VoiceXML document, said VoiceXML compiler generating executable code configured for execution tracking, the executable code including marker information, wherein responsive to the executable code, said VoiceXML executor executes the VoiceXML document in an execution tracking mode as a function of the marker information.

12. The VoiceXML execution client of claim 11, wherein the marker information includes at least one marker for identifying at least one VoiceXML element and a respective location of the at least one VoiceXML element within the VoiceXML document.

13. The VoiceXML execution client of claim 12, wherein said VoiceXML executor further generates at least one marker information message in response to a detection of the at least one marker in the executable code during execution tracking, the at least one marker information message containing marker information configured to identify a respective VoiceXML element and its respective location within the VoiceXML document.

14. The VoiceXML execution client of claim 13, further wherein the at least one marker information message is

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configured to enable highlighting of the respective VoiceXML element in a display listing of the VoiceXML document.

15. The VoiceXML execution client of claim 11, wherein said VoiceXML executor performs execution tracking further as a function of an additional tracking message, wherein the additional tracking message includes at least one of interrogate a variable of the VoiceXML document, continue execution with tracking, and continue execution without tracking.

16. The VoiceXML execution client of claim 11, wherein responsive to detecting the downloading of the VoiceXML document by said VoiceXML compiler and prior to compilation of the VoiceXML document, said VoiceXML executor further for pausing an execution of the VoiceXML document and initializing the VoiceXML document for execution tracking.

17. The VoiceXML execution client of claim 16, further wherein initializing the VoiceXML document for execution tracking includes generating the marker information, the marker information including at least one marker for identifying at least one VoiceXML element contained within the VoiceXML document and for identifying a respective location of the at least one VoiceXML element within the VoiceXML document.

18. The VoiceXML execution client of claim 17, further wherein said VoiceXML executor configures the marker information to enable a highlighting of a respective at least one VoiceXML element in a display listing of the VoiceXML document on a remote display device.

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19. The VoiceXML execution client of claim 11, wherein the execution tracking mode includes an interactive execution of the VoiceXML document responsive to a detection of an occurrence of a VoiceXML element within the VoiceXML document, further wherein said VoiceXML executor generates message information configured to enable a highlighting of the respective VoiceXML element within a listing of the VoiceXML document on a remote display device.

20. A VoiceXML execution client comprising:

a VoiceXML executor having at least one input for receiving a tracking message, the tracking message including at least a request for execution tracking of a VoiceXML document; and

a VoiceXML interpreter operatively coupled to said VoiceXML executor, the VoiceXML interpreter, responsive to receipt by the VoiceXML executor of the tracking message, for monitoring a downloading of the VoiceXML document and in response to downloading of the VoiceXML document, said VoiceXML interpreter further for generating an executable interpretation of the VoiceXML document, the executable interpretation including marker information, wherein responsive to the executable interpretation, said VoiceXML executor executes the VoiceXML document in an execution tracking mode as a function of the marker information.

21. The VoiceXML execution client of claim 20, wherein the marker information includes at least one marker for identifying at least one VoiceXML element contained within the VoiceXML document and for identifying a location of the at least one VoiceXML element within the VoiceXML document.

22. The VoiceXML execution client of claim 21, wherein said VoiceXML executor configures the marker information to enable

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a highlighting of a respective at least one VoiceXML element within a listing of the VoiceXML document on a remote display device.

23. A method for tracking execution of a VoiceXML document of a VoiceXML application comprising:

transmitting a tracking command message to a VoiceXML execution client, the tracking command message including at least a request for tracking execution of the VoiceXML document;

responsive to a notification message indicating receipt of the execution tracking request by the VoiceXML execution client, displaying a listing of at least a portion of the VoiceXML document upon at least one display as a function of the notification message;

transmitting at least one further tracking command message to the execution client, the at least one further tracking command message including at least one of interrogate a parameter of the VoiceXML document, continue execution with tracking, and continue execution without tracking, wherein the execution client executes the VoiceXML document in an execution tracking mode as a function at least one further tracking command message; and

responsive to receipt of an tracking information message from the VoiceXML execution client, the tracking information message including at least marker information, highlighting at least one portion of the VoiceXML document text on the at least one display as a function of the marker information.

24. The method of claim 23, wherein the marker information includes at least one marker indicating an occurrence of at least one VoiceXML element within the VoiceXML document and a respective location of the at least one VoiceXML element within the VoiceXML document.

25. The method of claim 23, wherein the at least one further tracking command message includes at least one of interrogate a parameter of the VoiceXML document, continue execution with tracking, and continue execution without tracking.

26. The method of claim 23, wherein execution tracking of the VoiceXML document by the VoiceXML execution client includes pausing execution upon a detection of an occurrence of a VoiceXML element within the VoiceXML document, and wherein marker information includes information for enabling a highlighting of the respective VoiceXML element within the VoiceXML document.

27. A VoiceXML execution tracker apparatus for tracking execution of a VoiceXML document of a VoiceXML application comprising:

at least one output for transmitting a tracking command message to a VoiceXML execution client, the tracking command message including at least a request for tracking execution of the VoiceXML document;

at least one display for displaying a listing of at least a portion of the VoiceXML document as a function of a notification message, the notification message indicating receipt of the execution tracking request by the VoiceXML execution client, wherein said at least one output is further for transmitting at least one additional tracking command message to the execution client, the at least one additional tracking command message including at least one of interrogate a parameter of the VoiceXML document, continue execution with tracking, and continue execution without tracking, wherein the execution client executes the VoiceXML document in an execution tracking mode as a function at least one additional tracking command message; and

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means, responsive to receipt of an tracking information message from the VoiceXML execution client, the tracking information message including at least marker information, for highlighting at least one portion of the VoiceXML document text on said at least one display as a function of the marker information.

28. The apparatus of claim 27, wherein the marker information includes at least one marker indicating an occurrence of at least one VoiceXML element within the VoiceXML document and a respective location of the at least one VoiceXML element within the VoiceXML document.

29. The apparatus of claim 27, wherein the at least one additional tracking command message includes at least one of interrogate a parameter of the VoiceXML document, continue execution with tracking, and continue execution without tracking.

30. The apparatus of claim 27, wherein execution tracking of the VoiceXML document by the VoiceXML execution client includes pausing execution upon a detection of an occurrence of a VoiceXML element within the VoiceXML document, and wherein marker information includes information configured to enable a highlighting of the respective VoiceXML element within the listing of the VoiceXML document.

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